

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended): A method for measuring internal pressure of a body comprising:
aligning with the body a longitudinal axis of a light ~~projecting and~~ collecting and
delivering device having an axially extending lumen with said body;

illuminating the body by way of the light collecting and delivering device and applying thereto
a pneumatic pulse capable of substantially flattening the body, the illuminating light beam and the
pneumatic pulse passing axially through the lumen,

guiding by total internal reflection through the light collecting and delivering device light
reflected from the body to a detector when the body is in a non-flattened configuration, the light
when the body is in a flattened configuration being reflected into the lumen and prevented from
reaching the detector; and

detecting changes of intensity of light reflected from a convex sector of a surface of said
body and delivered by total internal reflection in a light guide, and

wherein said changes are related to a distortion induced by a pneumatic pulse, and
matching a time-related feature associated with said changes of said in the light intensity of light
reflected to the detector measured with a given pressure value related to mechanical disturbance,

wherein said time related-feature is any of the following at least one of: a time length of
said pneumatic pulse, a time interval in which said changes of said light intensity measured are
detected, and a slope of said changes of said light intensity measured.

Claim 2 (Currently Amended): A The method for measuring internal pressure of a body as in
claim 1, wherein said time-related feature is a slope of said changes of said light intensity
measured.

Claim 3 (Currently Amended): A The method for measuring internal pressure of a body as in
claim 1, wherein said body is an eye and the aligning comprises centering a reticule image in a
field of view of the eye.

Claim 4 (Currently Amended): A ~~The~~ method for measuring internal pressure of a body as in claim 1, ~~[[and]]~~ wherein said light ~~projecting and~~ collecting and delivering device is a unitary light projecting and collecting device tube (LPCT).

Claim 5 (Canceled).

Claim 6 (Currently Amended): A device for measuring internal pressure of a deformable body ~~wherein changes in the reflectance of a sector of said body are measured in correlation with a distortion of said body effected by a pneumatic pulse, and wherein said sector located within a convex surface of said body;~~ said device comprising:

a light collecting and delivering device formed of a wall surrounding a lumen, the wall having an end surface for receiving light reflected by the body, the light being guided to travel along the wall by total internal reflection within the wall,

an illuminating beam source for providing a light beam to the body, the light beam passing through the lumen of the light collecting and delivering device;

an air source for providing a pneumatic pulse of compressed air to the body by way of the lumen of the light collecting and delivering device to flatten a convex surface of the body;

a light detector mounted to receive light reflected by the body and passing through the wall of the light collecting and delivering device when the body is in a non-flattened configuration but not to receive light reflected by the body into the lumen of the light collecting and delivering device when the body is in a flattened configuration; and

a control unit connected to the detector to provide a measure of the internal pressure of the body.

a first tube having a substantially thick wall pointing at said sector wherein the proximal face of said wall is adapted to receive light reflected from said body;

a second tube for conveying pneumatic pulse to said deformable body; a light detector receiving light from said wall of said first tube; and

a reflector used for both deflecting a beam of light of a light source through the lumen of said first tube to said body and for blocking reflected light from said body.

Claim 7 (Currently Amended): ~~A-The device for measuring internal pressure of a deformable body as in claim 6, 5 and wherein said deformable body is an eye and the device further comprises a reticule for projecting an image thereof on the eye.~~

Claim 8 – 9 (Canceled).

Claim 10 (Currently Amended): ~~A-The device for measuring internal pressure of a deformable body as in claim 6, 5 and wherein further comprising a mounting is included for securing said the device to [[the]] a head of the a user.~~

Claim 11 (New): The device as in claim 6, wherein:

the control unit is adapted to match a time-related feature associated with changes in the light intensity of light reflected to the detector with a given pressure value related to mechanical disturbance; and

the time related-feature is at least one of: a time length of said pneumatic pulse, a time interval in which said changes of said light intensity measured are detected, and a slope of said changes of said light intensity measured.